

DOMESTIC FUEL PRICE HIKE AND PURCHASE OF CARS IN WILAYAT OF NIZWA SULTANATE OF OMAN – A FACTOR ANALYSIS APPROACH

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ABSTRACT

Hike in domestic oil prices can impact an economy at the micro level and macro level. This study aims at identifying the overriding factors that influence an existing or prospective consumer in their car purchase decision. A sample of 366 respondents holding driving license were taken for the study from Nizwa, Sultanate of Oman. The analysis revealed that the domestic fuel price has affected the respondents in terms of transportation costs, usage of car, cost of other commodities in the market, petrol consumption, decision making with regards to purchase of cars and price of domestic gas.

KEYWORDS: Economy, Oil Prices, Price Hike & Automobile Industry

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INTRODUCTION

Oil based economies depend much on the revenue generated by the production, refinement and sale of oil to economies that import oil. Oil is a necessity to produce and transport many other goods. A major usage of oil goes into consumer automobiles. Therefore, all the developing circumstances around the oil economy will have a major impact on other sectors of the economy. Oil and fuel prices are rising in Oman, since January 2016. A resident of Oman will notice up to a more than 80% (a jump from 0.120 RO to 0.218 RO) increase in the price of petrol in spite of Oil prices in the market being low. The cost of petrol at the pump has increased by almost 75 per cent since the government scrapped its fixed-price policy in January 2016 – from 120 baisa before the policy was scrapped to 186 baisa in February 2017. (Silvia Razgova, The National, February, 2017). Oman's government has announced plans to introduce a new fuel subsidy scheme for low-income Omanis starting from January 2018. The Government's decision aims to ensure the welfare of citizens. As per this mechanism, Omani citizens who meet eligibility requirements will get 200 litres per month of M91 petrol at a cost of not more than 180 baisa per litre. The mechanism relies on a system that connects the Royal Oman Police's system with fuel marketing companies to ensure accuracy and smooth implementation. This scheme is applicable to Omani citizens above the age of 18, who own in their names a vehicle registered with Royal Oman Police or a fishing boat registered with the Ministry of Agriculture and Fisheries - if their total monthly income from all sources is not more than 600 riyals. (Fahad Al Mukrashi, The Gulf News, December, 2016).

In spite of citizens' welfare schemes launched by the Sultanate's Government, total vehicle registrations

in the Sultanate dropped by 18.3 percent to 73,798 during the first eleven months of 2017, and that is below 90,329 registrations for the corresponding period in 2016. (A E James, Times of Oman, January 2018)

REVIEW OF LITERATURE

Volatile oil prices adversely affect transport sector. Therefore, it might be worthwhile to simulate the effects of a significant and durable change in oil price on transport cost, transport demand, and transport externalities (Jacques Delsalle, 2002). Global demand for oil has been and is attributed largely on rapidly developing nations, especially China and India. These economies have become increasingly industrialized and urbanized and have contributed to an increase in the world demand for oil. In addition, in recent years fears of supply disruptions have been spurred by turmoil in oil-producing countries such as Nigeria, Venezuela, Iraq, and Iran (Brown 2006). Upsurge in petrol price has a rippling effect as all merchandises are transported on vehicles that run on petrol or diesel. So, increase in petrol price results in price rise of merchandises as well. The common man of the nations suffers the maximum impact, bears the gravity of inflation and any escalation in petrol price will further shrink the real household disposable income. If the petrol price keeps swelling, then every other item demanded by the household will also get costlier resulting in fewer saving and more expenditure consequently affecting the real estate, banking and other sectors in an economy (Ramandeep Kaur, 2013). According to a Government survey by National Centre for Statistics and Information (NCSI) in Oman, 45 % of Omanis stated that the rise in fuel prices has had a significant effect on them and 34 % of Omanis believe that altering the fuel prices has negatively impacted the country. (NCSI, July 2016). Sultanate of Oman's oil and gas reserves are relatively less than its counterparts in GCC. A steep fall in oil prices in the later part of 2014 necessitated Oman Government to take bold steps to boost revenues from non-oil sources viz. revising electricity & water tariffs for commercial and industrial users, increasing fees for government services including: licenses and labor cards, vehicle registration, real-estate transactions and land allocation, 35 % tax on petrochemical firms, subsidy cuts, reduced benefits for public sector workers, doubling of gas prices for industrial users, local fuel prices being brought in tandem with global prices, increase in corporate income tax rate from 12 % to 15 % approved by the Shura Council (World Bank, IBRD.IDA, July, 2016). Increase in fuel prices have increased the prices of many commodities resulting in upward shift in cost of living, monthly expenditure and the general public is recognizing the importance of public transport system and carpooling to reduce cost of transportation that has adversely affected the economy (Muscat daily, May 2018).

Statement of the Problem

Hike in domestic oil prices has adversely affected all the citizens and particularly low income families. This has caused a strain on house hold disposable income and affected the monthly budget, pushing the common man to cut down on his: leisure trips, eating out habits, recreational activities, and medical services and forcing families to stay at home. Given this backdrop, hybrid cars, that are known to produce less emission and running on green technology, may gain popularity in spite of its high cost. Therefore, auto makers are in the process of innovation and pushing towards hybridization of cars and are considered the answer to highest cost ownership in terms of fuel consumption. Hybrid cars/vehicles are not independent of disadvantages. Sultanate of Oman needs to step up its infrastructure to support this technology. Therefore, petrol and diesel vehicles are cost effective till date. Therefore, the common man is forced to consider his budget and identify a vehicle that fits his pocket. There have been enough studies on domestic fuel price hike and its impact on society, but impact of domestic fuel price hike on purchase of cars in Wilayat of Nizwa in Oman is not been carried out and to that extent the study is relevant.

OBJECTIVES OF THE STUDY

- To identify major factors/variables that influences car purchase decisions due to domestic fuel price hike in Oman.
- To develop a model of factors/variables that create an impact car purchase of the population under study in the light of domestic fuel price hike in Oman.

SCOPE OF THE STUDY

The purpose of the study is to understand the impact of domestic fuel price hike in the Sultanate on sale of cars in Wilayat of Nizwa and provide appropriate recommendations to automobile marketers to address concerns of customers. This study will help the prospective customers that intend purchasing cars to make informed decisions in the light of steep fuel price hike. This study will also help marketers to target prospective customers with offers that address the issue of fuel price hike and a possible solution to the customers in terms of the vehicles' improved mileage/fuel economy.

RESEARCH METHODOLOGY

An exploratory study is conducted among the four wheeler license holders in Al Dakhliya Region of Sultanate of Oman. The sampling frame comprises of 32,000 people in the Wilayat of Nizwa holding a valid driving license. Subjects without a valid driving license were excluded from the study as they are not likely to make a decision to purchase vehicles in the foreseeable future. A sample of 366 (Krejcie and Morgan, 1970) responded to the instrument. A structured questionnaire was used to obtain primary data. Convenience sampling technique was used. Statements containing Likert's Five Point scale was used. The reliability of the instrument is calculated at the Cronbach's Alpha value is 0.830. The response is 100 %, and therefore 366 filled responses in the Google forms were taken up for the study. Factor analysis was used to identify the core variables that create an impact on the sale of cars in Wilayat of Nizwa. The period of study was from January 2018 to December 2018.

RESULTS AND DISCUSSIONS

Descriptive Statistics

A sample of 366 responses was obtained from form nearly 32,000 driving license holders in Wilayat of Nizwa. The demographic profile of the sample respondents are briefly explained as follows. 32 % of respondents are females and remaining 68% are males. Comparing the age group of respondents, 34 % belong to the age group of 20-30 years. 38 % of the respondents are in the age group of 31-40 years. 17 % of respondents belong to the age group 41-50 etc. Of the total respondents taken up for the study, 86 % of respondents already own vehicles/cars and the remaining 14 % of respondents do not own vehicles. 22 % of respondents belong to the income bracket less than RO 500, 41 % of respondents belong to the income bracket RO 500-1000, and 21 % of respondents belong to income bracket 1001-1500. This is shown in table 1

Table 1: Demographic Profile of Respondents

Respondents' Profile		Number of Respondents	Percentage
Gender	Male	249	68
	Female	117	32
	Total respondents	366	100
Age group	21 – 30	125	34
	31 – 40	139	38

	41 – 50	62	17
	51 – 60	33	9
	61 – 70	7	2
	Total respondents	366	100
Ownership of vehicles/cars	Owners	315	86
	Non - owners	51	14
	Total respondents	366	100
Income group	< 500 OMR	80	22
	501 – 1000 OMR	154	42
	1001 – 1500 OMR	77	21
	1501 – 2000 OMR	29	8
	2001 – 2500 OMR	15	4
	2501 – 3000 OMR	11	3

The first output from the factor analysis is the table of descriptive statistics of the variables under investigation. This is provided in Table 1. The mean and standard deviation of the 366 respondents that participated in the survey are given. From the Mean values, it can be concluded that the respondents consider that there is a strong relationship between the commodity prices and petrol/fuel price (X17). It has the highest mean of 3.86 on a scale of 5. The second most important factor is found to be the need to switch over to cheaper fuel if the petrol/fuel price keeps rising (X16), followed by X15 and X14 that states that the residents of Wilayat of Nizwa consider petrol price to be the overriding factor (X14) and think twice before making a high end car purchase decision (X15), respectively

Table 2: Descriptive Statistics of the Variables in the Study

S. No	Statements	Mean	Std. Deviation
1	Crude oil prices are low in the international market. (X1)	2.49	1.46
2	Gulf countries depend on oil revenue from its exports.(X2)	3.52	1.28
3	I am aware of the factors that determine petrol prices in international market.(X3)	2.88	1.26
4	There has always been a salary increase in my employment every year.(X4)	2.24	1.13
5	Petrol/fuel price rise have increased the transportation costs for the public.(X5)	3.45	1.22
6	Petrol/fuel price rise have not affected my usage of car.(X6)	2.35	1.12
7	Petrol/fuel price rise have not bothered me economically.(X7)	2.35	1.09
8	Petrol/fuel price rise does not affect price of other commodities.(X8)	2.22	1.06
9	Petrol/fuel consumption of the car is a concern for car owners.(X9)	2.87	1.29
10	It is becoming difficult to own a car in the light of petrol/fuel price rise.(X10)	3.06	1.20
11	Petrol/fuel price rise stops me to plan for purchasing a new car.(X11)	3.17	1.18
12	Public transport system in Oman is good.(X12)	2.90	1.09
13	There are alternate transport facilities available for the public other than cars.(X13)	3.01	1.22
14	Petrol/fuel consumption is the most important factor in deciding the purchase of a car.(X14)	3.72	1.26
15	The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise.(X15)	3.78	1.23
16	There is a need to switch over to cheaper fuel for if prices keep increasing.(X16)	3.79	1.21
17	There is a strong relationship between fuel prices and prices of commodities.(X17)	3.86	1.20
18	Petrol/fuel price rise may result in rise in price of domestic gas.(X18)	3.23	1.24
19	Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity.(X19)	3.05	1.18
20	Oil price fall in the international market have resulted in job cuts in many sectors as production goods and services are badly hit.(X20)	3.03	1.27
21	Oil price fall in the international market have resulted in lower investment in infrastructure projects in Oman(X21)	2.98	1.19
22	Petrol/fuel price for domestic consumption have been increased to bridge the deficit, due to oil price fall in the international market.(X22)	3.37	1.20

Kaiser-Meyer-Olkin Barlett Measure of Sampling Adequacy

Table 3 shows the important parts of SPSS output; Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The KMO statistics varies between 0 and 1. A value of 0 indicates that the sum of the partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations. Hence, a factor analysis is inappropriate. A value close to 1 indicates that pattern of correlations are relatively compact and so factor analysis should yield a distinct and reliable results. Kaiser (1974) recommends values lesser than 0.49 are unacceptable, values greater than 0.5 to 0.59 as miserable. Values between 0.6 and 0.69 are mediocre, values between 0.7 and 0.79 are middling, values between 0.8 and 0.89 are meritorious and values between 0.9 and 1.00 to be marvelous.

For the data collected for this research, the value is 0.843 and is considered as meritorious and hence the data comfortably qualifies to conduct factor analysis (Principal Component Analysis).

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.843
Bartlett's Test of Sphericity	Approx. Chi-Square	3506.495
	df	231
	Sig.	.000

Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix. For factor analysis to work there must be some relationships, and if R-Matrix is an identity matrix, then all correlation coefficients would be zero. A significance test tells that the R – Matrix is not an identity matrix; therefore, there are some relationships between variables. In the data collected for the study, Bartlett's test is highly significant (0.000) and therefore the factor analysis (Principal Component Analysis) is considered appropriate.

Correlation Matrix

Correlation matrix investigates the dependence between multiple variables at the same time. The result is a table containing the correlation coefficients between each variable and the other variables. SPSS by default gives out Pearson Correlation Coefficient and it measures the linear dependence between two variables. Kendall and Spearman Correlation methods are non-parametric(conditional) rank-based correlation test.

Communalities

Principal Component Analysis works on the initial assumption that all variance is common. Therefore, before extraction, the communalities are all 1. The communalities in the column labelled extraction reflect the common variance in the data structure. Communalities explain the variance in common and are implied on a scale of 1. If the value of communality is more than 0.6, then it will cause a good factor loading.

Table 4: Communalities

S. No	Statements/Factors/Variables	Initial	Extraction
1	Crude oil prices are low in the international market. (X1)	1	0.671504
2	Gulf countries depend on oil revenue from its exports.(X2)	1	0.607992
3	I am aware of the factors that determine petrol prices in international market.(X3)	1	0.654281
4	There has always been a salary increase in my employment every year.(X4)	1	0.480317
5	Petrol/fuel price rise have increased the transportation costs for the public.(X5)	1	0.482855
6	Petrol/fuel price rise have not affected my usage of car.(X6)	1	0.645122

Table 4: Contd.,

7	Petrol/fuel price rise have not bothered me economically.(X7)	1	0.729998
8	Petrol/fuel price rise does not affect price of other commodities.(X8)	1	0.640918
9	Petrol/fuel consumption of the car is a concern for car owners.(X9)	1	0.339373
10	It is becoming difficult to own a car in the light of petrol/fuel price rise.(X10)	1	0.509258
11	Petrol/fuel price rise stops me to plan for purchasing a new car.(X11)	1	0.688117
12	Public transport system in Oman is good.(X12)	1	0.539308
13	There are alternate transport facilities available for the public other than cars.(X13)	1	0.487302
14	Petrol/fuel consumption is the most important factor in deciding the purchase of a car.(X14)	1	0.707482
15	The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise.(X15)	1	0.750578
16	There is a need to switch over to cheaper fuel for if prices keep increasing.(X16)	1	0.755527
17	There is a strong relationship between fuel prices and prices of commodities.(X17)	1	0.724974
18	Petrol/fuel price rise may result in rise in price of domestic gas.(X18)	1	0.631391
19	Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity.(X19)	1	0.728407
20	Oil price fall in the international market have resulted in job cuts in many sectors as production of goods and services are badly hit.(X20)	1	0.715128
21	Oil price fall in the international market have resulted in lower investment in infrastructure projects in Oman(X21)	1	0.721105
22	Petrol/fuel price for domestic consumption have been increased to bridge the deficit, due to oil price fall in the international market.(X22)	1	0.552363

75.5 % of the variance is attributed to the statement “There is a need to switch over to cheaper fuel for if prices keep increasing (X16)”. 75 % of the variance is attributed to the statement “The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise(X15)”. 72.8 % of the variance is attributed to the statement “Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity (X19)”.

Factor Extraction

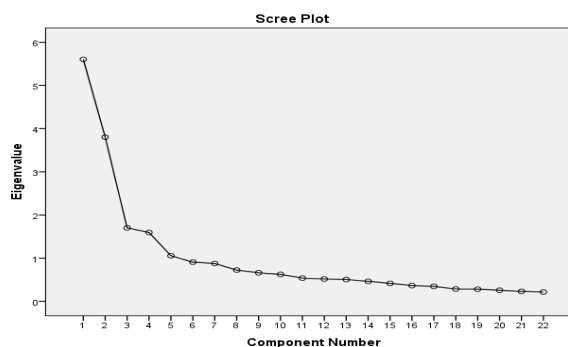
The SPSS output in table 5 lists the Eigen values associated with each linear factor before extraction, after extraction and after rotation. Before extraction, SPSS has identified 22 linear components with in the data set. The Eigen values associated with each factor represent the variance explained by that particular linear component and SPSS also displays Eigen values in terms of percentage of variance explained. So, factor 1 (Crude oil prices are low in the international market) explains 25.477% of total variance. SPSS extracts all the factors with Eigen values greater than 1 that leaves with five factors. The Eigen values associated with these factors are displayed in the column labeled percentage of variance. The values in the extracted sum of sum of squared loadings are the same as the values before extraction, except that the values for the discarded factors (after five factors) are ignored. In the rotation sums of squared loadings, the Eigen values of the factors after rotation are displayed. Before rotation, factor 1 accounted for more variance (25.477 %), than the remaining four factors. However, after extraction/rotation, it accounts for only 16.67 % of variance. Similarly, factor 2 (Gulf countries depend on oil revenue from its exports) accounts for 13.87 % of the variance. Thus, 62.56 % of the cumulative variance is contributed by the first 5 variables (X1, X2, X3, X4 and X5) and remaining factors contribute only 37.44 % of cumulative variance.

Table 5: Factor Extraction -Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
X1	5.605	25.477	25.477	5.605	25.477	25.477	3.667	16.670	16.670
X2	3.804	17.290	42.767	3.804	17.290	42.767	3.051	13.870	30.540
X3	1.702	7.737	50.504	1.702	7.737	50.504	2.764	12.563	43.103
X4	1.597	7.257	57.760	1.597	7.257	57.760	2.424	11.018	54.122
X5	1.056	4.800	62.560	1.056	4.800	62.560	1.857	8.439	62.560
X6	.909	4.134	66.694						
X7	.878	3.992	70.686						
X8	.725	3.297	73.983						
X9	.662	3.010	76.993						
X10	.625	2.840	79.833						
X11	.539	2.450	82.284						
X12	.519	2.357	84.641						
X13	.506	2.298	86.939						
X14	.465	2.114	89.053						
X15	.417	1.898	90.950						
X16	.367	1.668	92.619						
X17	.347	1.578	94.197						
X18	.287	1.306	95.503						
X19	.282	1.283	96.787						
X20	.259	1.179	97.965						
X21	.231	1.051	99.016						
X22	.216	.984	100.000						

Scree Plot

The Scree plot is a graph that shows the Eigen values against all factors/variables extracted by SPSS. Factors with Eigen value more than one are considered as statistically reliable factors.



Graph 1: Scree Plot

From the scree plot, five factors are identified with Eigen value more than one. The factors that cause the variance are explained with the help of a steep fall of the curve. Steep fall explains high variance and flat part of the curve shows the low variance it can be understood by comparing the table 5(Factor extraction) and graph 1 (Scree plot).

Component Matrix – Before Rotation

The component matrix – before rotation shown in table 6, contains the loadings of each factor into each factor. All the loadings less than 0.6 are suppressed in the output and hence there are blank spaces for many of the loadings. The table 7 shows the loadings (extracted values of each item under 2 variables) of 22 variables/factors on the 2 factors extracted. The higher absolute value of the loading, the more the factor contributes to variable. 2 variables are extracted,

wherein the 22 variables are divided into 2 variables according to the most important items with similar response in component 1 and 2. At this stage, SPSS extracted only two factors. However, according to Kaiser's criterion, five factors are to be extracted and are considered accurate. It is considered accurate when the average communalities is greater than 0.62. The average of the communalities is found by adding the communalities divided by the number of factors ($13.7633/22 = 0.6256$). Thus, on both the grounds, Kaiser's rule is accurate. Therefore, the researchers subjected the data to be rotated to arrive at five factors/variables, on which other factors can be conveniently loaded.

Table 6: Component Matrix– Before Rotation

Factors/Variables	Component				
	1	2	3	4	5
Crude oil prices are low in the international market. (X1)	.700				
Gulf countries depend on oil revenue from its exports.(X2)	.681				
I am aware of the factors that determine petrol prices in international market.(X3)	.678				
There has always been a salary increase in my employment every year.(X4)	.666				
Petrol/fuel price rise have increased the transportation costs for the public.(X5)	.648				
Petrol/fuel price rise have not affected my usage of car.(X6)	.633				
Petrol/fuel price rise have not bothered me economically.(X7)	.629				
Petrol/fuel price rise does not affect price of other commodities.(X8)	.620				
Petrol/fuel consumption of the car is a concern for car owners.(X9)					
It is becoming difficult to own a car in the light of petrol/fuel price rise.(X10)					
Petrol/fuel price rise stops me to plan for purchasing a new car.(X11)					
Public transport system in Oman is good.(X12)					
There are alternate transport facilities available for the public other than cars.(X13)					
Petrol/fuel consumption is the most important factor in deciding the purchase of a car.(X14)					
The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise.(X15)		.747			
There is a need to switch over to cheaper fuel for if prices keep increasing.(X16)		.685			
There is a strong relationship between fuel prices and prices of commodities.(X17)		.683			
Petrol/fuel price rise may result in rise in price of domestic gas.(X18)					
Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity.(X19)					
Oil price fall in the international market have resulted in job cuts in many sectors as production ods and services are badly hit.(X20)					
Oil price fall in the international market have resulted in lower investment in infrastructure projects in Oman(X21)					
Petrol/fuel price for domestic consumption have been increased to bridge the deficit, due to oil price fall in the international market.(X22)					
Extraction Method: Principal Component Analysis.					
a. 5 components extracted, but only two components are above 0.6. This is due to the total factor extraction and variance explained is above 0.62.					

Factor Rotation

In order to interpret the factors, a procedure called Rotation is often used. The concept of rotation is to reduce the number of factor, on which the variables under study have high level of loadings. This procedure gives out a matrix of factor loadings for each variable onto each factor after rotation. The researchers used Varimax Orthogonal Rotation to achieve uncorrelated factors in the analysis. The factor loadings that were obtained after the rotation is laid out in the following columns labelled as Rotated Component Matrix.

Table 7: Rotated Component Matrix

Rotated Component Matrix	Component				
	1	2	3	4	5
Crude oil prices are low in the international market. (X1)	.821				
Gulf countries depend on oil revenue from its exports.(X2)	.820				
I am aware of the factors that determine petrol prices in international market.(X3)	.820				
There has always been a salary increase in my employment every year.(X4)	.806				
Petrol/fuel price rise have increased the transportation costs for the public.(X5)					
Petrol/fuel price rise have not affected my usage of car.(X6)					
Petrol/fuel price rise have not bothered me economically.(X7)		.815			
Petrol/fuel price rise does not affect price of other commodities.(X8)		.815			
Petrol/fuel consumption of the car is a concern for car owners.(X9)		.804			
It is becoming difficult to own a car in the light of petrol/fuel price rise.(X10)		.730			
Petrol/fuel price rise stops me to plan for purchasing a new car.(X11)					
Public transport system in Oman is good.(X12)			.827		
There are alternate transport facilities available for the public other than cars.(X13)			.787		
Petrol/fuel consumption is the most important factor in deciding the purchase of a car.(X14)			.772		
The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise.(X15)			.671		
There is a need to switch over to cheaper fuel for if prices keep increasing.(X16)				.760	
There is a strong relationship between fuel prices and prices of commodities.(X17)				.685	
Petrol/fuel price rise may result in rise in price of domestic gas.(X18)				.659	
Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity.(X19)				.649	
Oil price fall in the international market have resulted in job cuts in many sectors as production goods and services are badly hit.(X20)					.788
Oil price fall in the international market have resulted in lower investment in infrastructure projects in Oman(X21)					.703
Petrol/fuel price for domestic consumption have been increased to bridge the deficit, due to oil price fall in the international market.(X22)					.694
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization. ^a					
a. Rotation converged in 7 iterations.					

There are five components identified by the SPSS and the factor loadings are represented in table 5. The factor rotation procedure resulted in the following factors.

There were four variables (X1, X2, X3, X4) heavily loaded on to the *first factor* and it relates to: Crude oil prices are low in the international market (X1), Gulf countries depend on oil revenue from its exports (X2), I am aware of the factors that determine petrol prices in international market (X3), There has always been a salary increase in my employment every year (X4). Therefore, the *first factor* is labelled as “*Crude oil prices, revenues in the international market and income level of consumers*”.

The four variables (X7, X8, X9 & X10) that loads heavily on the *second factor* relates to: Petrol/fuel price rise have not bothered me economically (X7), Petrol/fuel price rise does not affect price of other commodities (X8), Petrol/fuel consumption of the car is a concern for car owners (X9) & It is becoming difficult to own a car in the light of petrol/fuel price rise (X10). Therefore, the *second factor* is labelled as “*Petrol price rise and car ownership*”.

The variables (X12, X13, X14, X15) that loads heavily on the *third factor* relates to: Public transport system in Oman is good (X12), There are alternate transport facilities available for the public other than cars (X13), Petrol/fuel consumption is the most important factor in deciding the purchase of a car (X14) & The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise (X15). Therefore, the *third factor* is labelled as “*Public transport system and decision to purchase cars*”.

The variables (X16, X17, X18, X19) that loads on the *fourth factor* relates to: There is a need to switch over to cheaper fuel for if prices keep increasing (X16), There is a strong relationship between fuel prices and prices of commodities (X17), Petrol/fuel price rise may result in rise in price of domestic gas (X18) & Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity (X19). Therefore, the *fourth factor* is labelled as “*Impact of Petrol/Fuel prices rise on other sectors*”.

The variables (X20, X21, X22) that loads on the *fifth factor* relates to: Oil price fall in the international market have resulted in job cuts in many sectors as production goods and services are badly hit (X20), Oil price fall in the international market have resulted in lower investment in infrastructure projects in Oman(X21) & Petrol/fuel price for domestic consumption have been increased to bridge the deficit, due to oil price fall in the international market (X22). Therefore, the *fifth factor* is labelled as “*International Crude Oil price fall and its impacts on other sectors*”.

The analysis of the data proves that the initial questionnaire prepared comprises of five overriding factors on to which, other variables/factors are loaded. They are:

- Crude oil prices, revenues in the international market and income level of consumers.
- Petrol price rise and car ownership
- Public transport system and decision to purchase cars
- Impact of Petrol/Fuel prices rise on other sectors
- International Crude Oil price fall and its impacts on other sectors

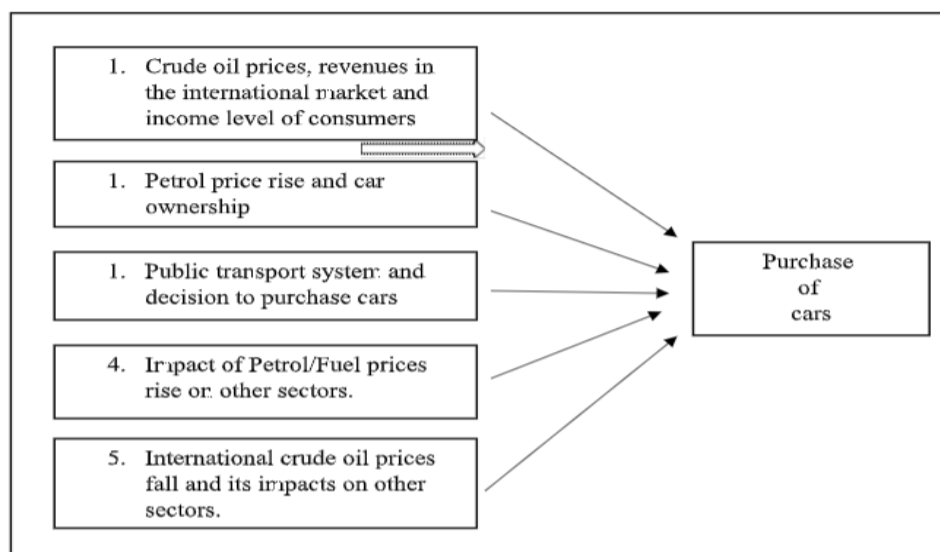


Figure 1: Factors and its Impact on Sale of Cars

The first, second and third factors are considered very strongly loaded with other variables/factors as is evident from the Rotated Component Matrix in table 7.

Findings of the Study

The most important variable that impacts the respondents is “There is a strong relationship between fuel prices and prices of commodities (X17)” with the highest mean of 3.86.

75.5 % of the variance is attributed to the statement “There is a need to switch over to cheaper fuel for if prices keep increasing (X16)”. 75 % of the variance is attributed to the statement “The residents in Wilayat of Nizwa think twice before making a decision to purchase a high end car due to petrol/fuel price rise(X15)”. 72.8 % of the variance is attributed to the statement “Oil price fall in the international market have resulted in the withdrawal of Government subsidy on electricity (X19)”.

It is found that the first five variables (X1, X2, X3, X4& X5) constitute 62.560 % of the cumulative variance. These variables impact the respondents in pushing the sale of cars in Wilayat of Nizwa.

There were four variables (X1, X2, X3, and X4) heavily loaded on to the first factor and it relates to: Crude oil prices, revenues in the international markets and income level of consumers and hence labelled as “Crude oil prices, revenues in the international market and income level of consumers”.

The four variables (X7, X8, X9 & X10) that loads heavily on the second factor relate to: Petrol/fuel price rise and the difficulty in owning car and hence labeled as “Petrol price rise and car ownership”.

The variables (X12, X13, X14, X15) that loads heavily on the third factor relate to: Public transport system and car purchase decisions and hence labeled as “Public transport system and decision to purchase cars”.

The variables (X16, X17, X18, X19) that loads on the fourth factor relate to: Relationship of petrol/fuel prices on other sectors and hence labeled as “Impact of Petrol/Fuel prices rise on other sectors”.

The variables (X20, X21, X22) that loads on the fifth factor relate to: Oil price fall, job cuts, investment in infrastructure and hence labeled as “International Crude Oil price fall and its impacts on other sectors”.

CONCLUSIONS

The research attempted to understand the fundamental variable that influences the car purchase decisions of the residents in Wilayat of Nizwa in relationship with other contributing factors. Various factors identified were namely: Crude oil prices, revenues in the international market and income level of consumers; Petrol price rise and car ownership; Public transport system and decision to purchase cars; Impact of Petrol/Fuel prices rise on other sectors and finally International crude oil prices fall and its impacts on other sectors. The study also threw light on the impact of the fuel price rise on other sectors viz. commodities, gas, job cuts in production and manufacturing sector, subsidy in electricity, investment in infrastructure, need for an alternate and a cheaper source of fuel etc. It is indispensable for the prospective car purchasers to make a purchase decisions taking into consideration the various factors that may impact their decision.

Future Direction of the Study

There was no known study conducted in this domain, and there was a felt need by the researchers to conduct a study to update the automobile marketers on the current findings. The researchers identified the overriding factors that

influence the car purchase decision of the current and prospective customers in Wilayat of Nizwa. Researchers recommend automobile marketers to address the issue of fuel price hike to their parent producers and innovate the products in terms of features that would give mileage efficiency for the current and prospective customers who purchase cars. There is a scope of extending the study on the behavior of existing and prospective customers in terms of their quantity of consumption of fuel in the light of fuel price hike.

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